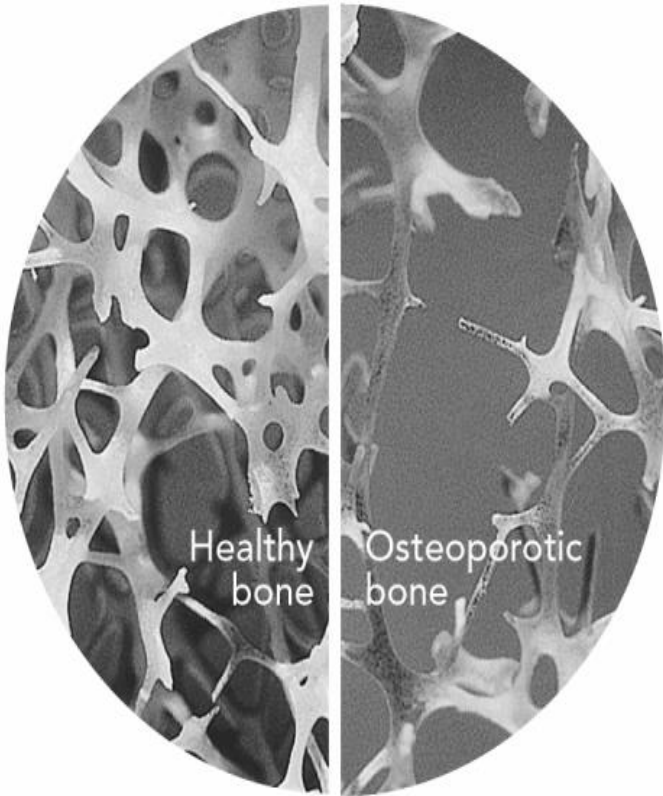


به نام خداوند جان و خرد

NURSING CARE in

OSTEOPOROSIS



A.Shakrohi , MSc

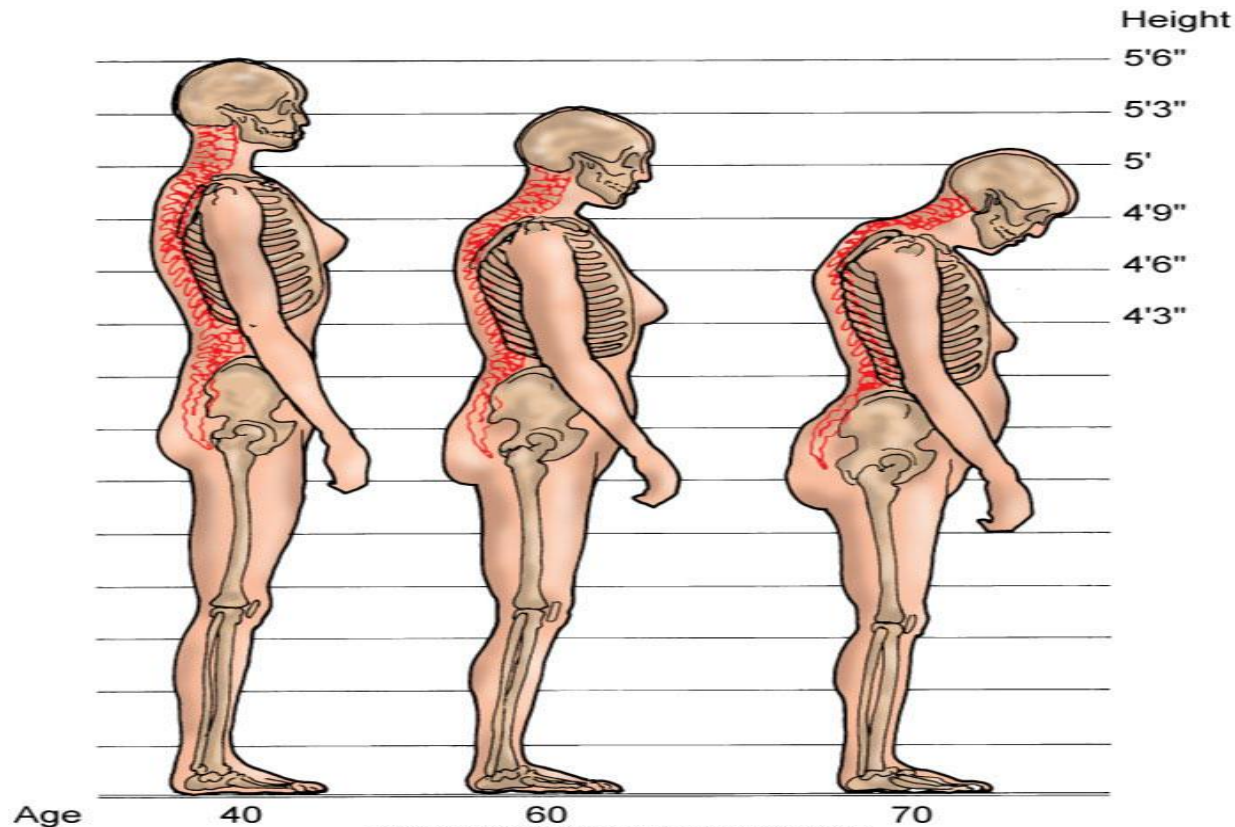
Nursing & Midwifery School

Gazvin University of Medical Sciences

A disease of women

&

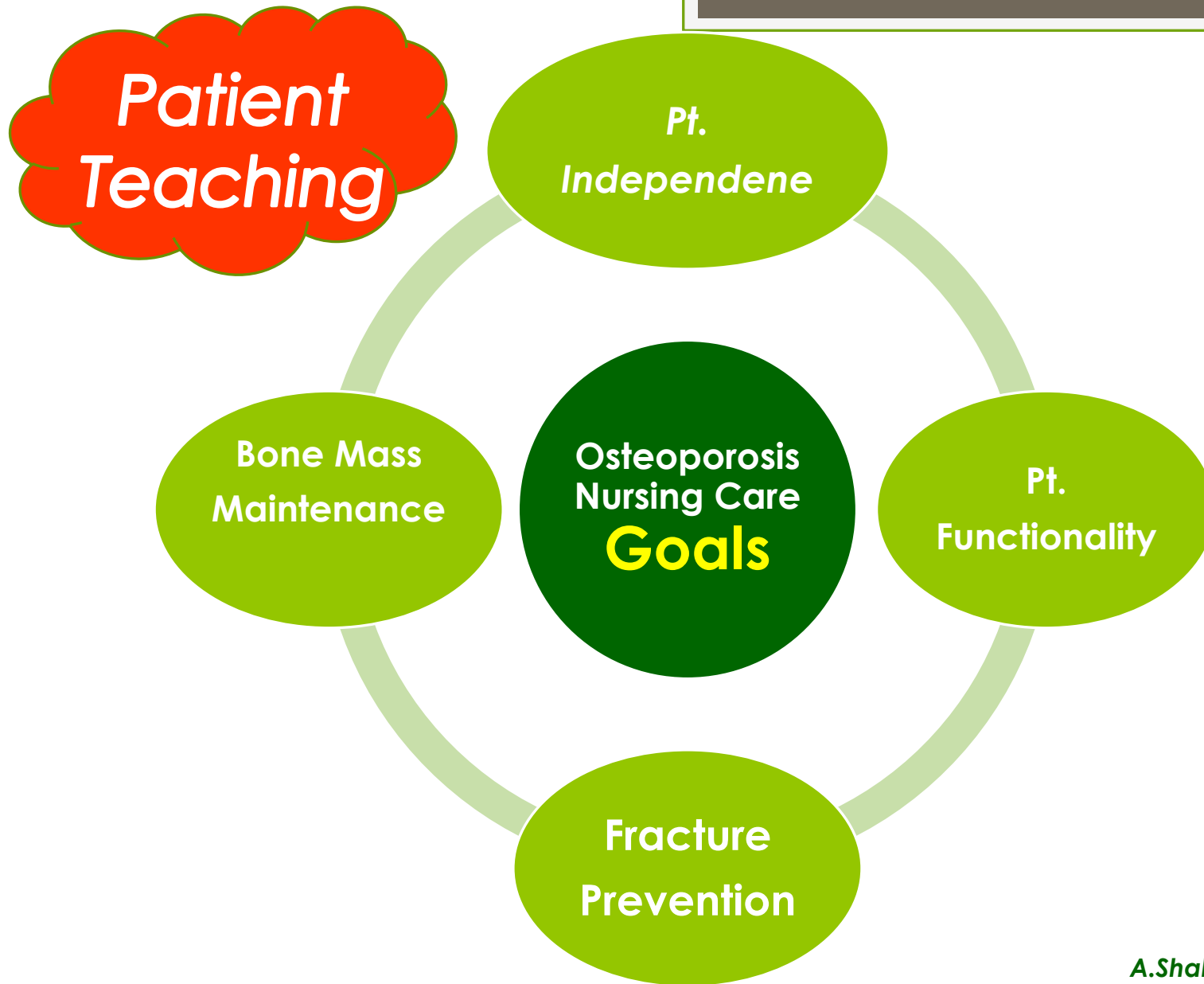
occasionally men



A.Shahrokhi, MSc

Nursing Care

*involves **motivating** patients
to **change** their lifestyle,
helping them to **adapt** their
limitations through
educating about
Osteoporosis.*





NURSING ASSESSMENT

Modifiable Risk Factors

***Dietary
Pattern
&
Habits***

***Physical
Activity
Pattern***

Environmental Factors

***Safety
facilities***

Hazards

Mental & Cognitive Status

***Learning
Capabilities***

Motivation

Patient Assessment

- ❖ Dietary Pattern(Use of Ca & Vit D sources, fluids, alcohol & Caffeine,...)
- ❖ Current Activity Level:
 - * ADL & Exercises(kind, frequency, duration),
 - * ROM(abilities/limitations),
 - * Mobility(gait, balance, falling risk)
- ❖ Pain & Discomfort(location, severity,description,aggravating&Alleviating factors, predisposing situations)
- ❖ Neurological&Cognitive Status(dementia,confusion,feelings, self concept,motivation,concentration&learning ability,...)
- ❖ Living Environment(lighting,floor, cords,carpets,...)
- ❖ Medical History(diseases,fractures,...)
- ❖ Medication History(prescribed,herbal,...)

Nursing Diagnoses:

- ***Ineffective Therapeutic Regimen Management***
- ***Impaired Physical Activity***
- ***Pain***
- ***Risk for Falling & Trauma(Fractures,...)***

Expected Outcomes

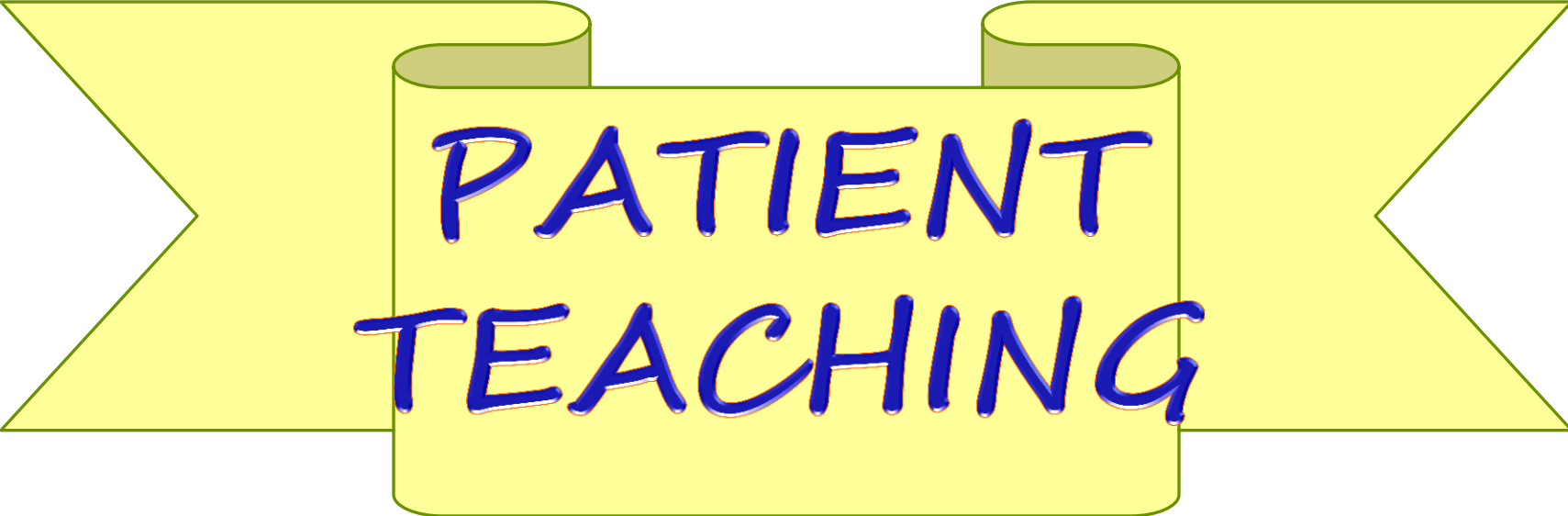
- ✓ **Effective management through describing & demonstrating**

BONE-HEALTHY BEHAVIORS

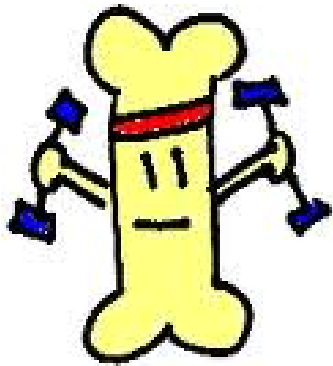
- ✓ **Absence of trauma & performing daily activities without falling through establishing**

HAZARD-FREE ENVIRONMENT

- ✓ **Pain Relief**



PATIENT TEACHING



HEALTH PROMOTION & ILLNESS PREVENTION

- ❖ Teaching should begin with young women who begin to lose bone after 30 years of age.
- ❖ The focus of osteoporosis prevention is to decrease modifiable risk factors.
- ❖ Ensure adequate calcium & Vit D intake.
- ❖ Avoid sedentary lifestyle.
- ❖ Continue program of weight-bearing exercises.



Life Long Bone-Healthy Behavior



Adequate Calcium Intake

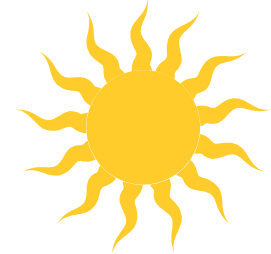


Adequate Vit D Intake

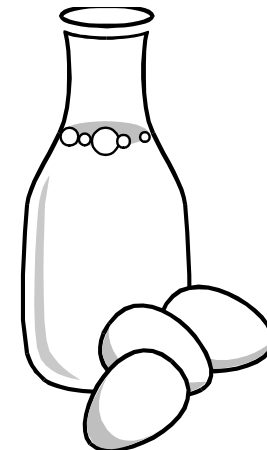


**Regular Weight-Bearing
Exercises**

Adequate Ca & Vit D Intake



- ❖ *Foods high in Ca(dairy products, dark green leafy vegetables,...)*
- ❖ *Foods sources of Vit D(egg yolk, liver, fortified milk,...)*
- ❖ *Adequate(not excessive) Protein intake*
- ❖ *Monitor for S & S of lactose intolerance (diarrhea, flatulence, bloating)*
- ❖ *Excessive amount of fluids if Ca supplement is administered*
- ❖ *15 – 30 minutes daily sun exposure*



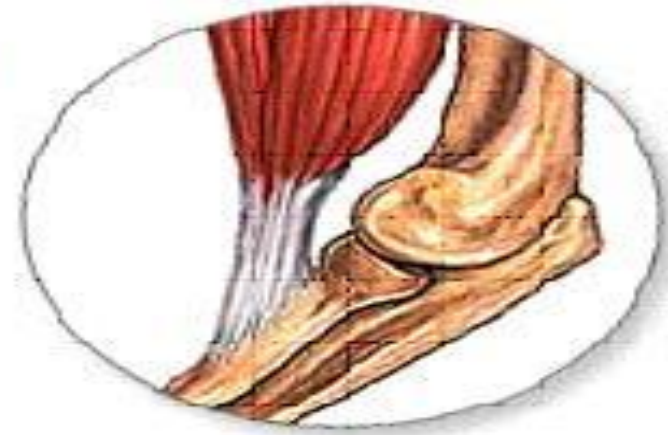
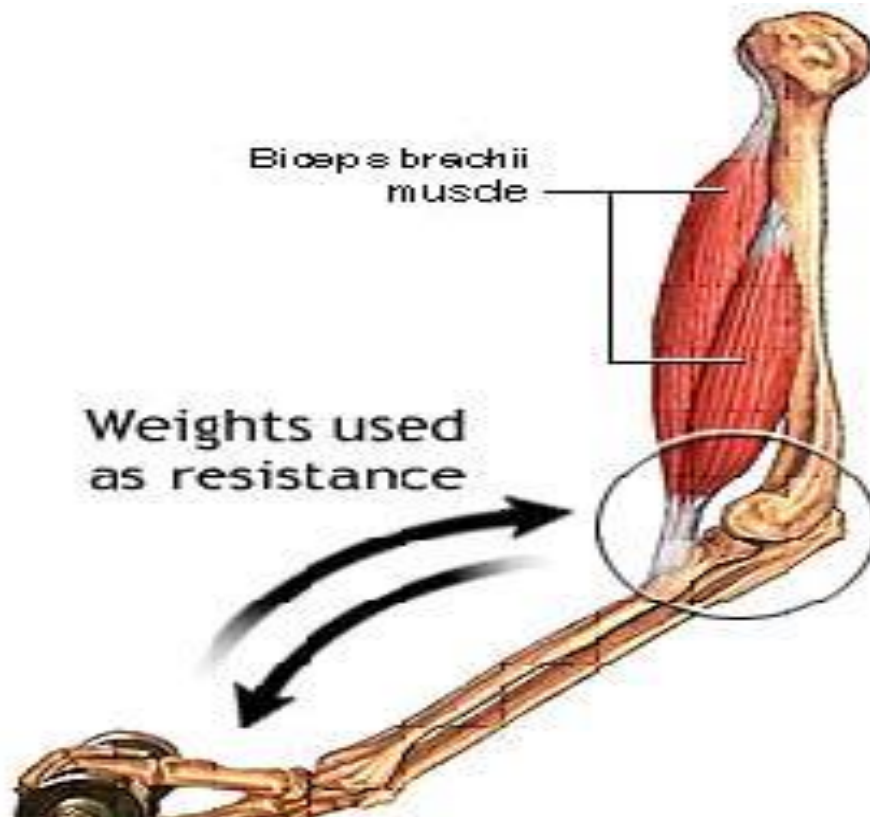
Vitamin D



Calcium



WEIGHT-BEARING EXERCISES



Skeletal muscle pulls against the bone, causing it to rebuild and become denser

Weight-Bearing Exercises

- ❖ *Exercises that result in movement (stress on long bones):*
 - * *Increase in bone formation*
 - * *Improve physical fitness*
 - * *Improve muscle strength*
 - * *Improve stability & felxibility*
 - * *Improve balance & coordination*
 - * *Reduce risk of falling & subsequent fractures*



Walking, Running, bicycling, swimming, rowing,...

Weight-Bearing Exercises

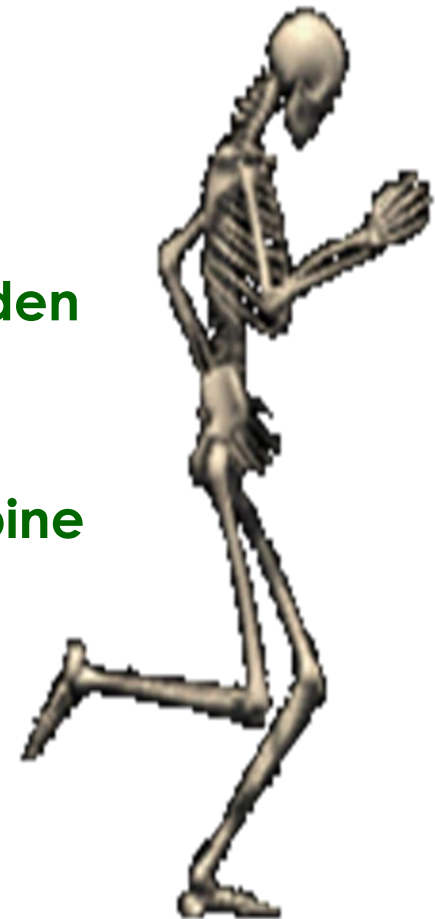


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Weight-Bearing Exercises

- Exercise at least 3 times a week for 30-60 minutes each session
- Avoid flexion exercises of the spine & sudden bending, strenuous lifting)
- Avoid activities that rotate the vertebral spine
- Adequate rest
- Use assistive devices (cane, brace, walker,... if necessary)



Tai-chi helps reduce falls by enhancing muscle strength



**No Tobacco
&
Smoking**



**No
Alcohol**



MEDICATION

Ca Supplement

- ✓ Increase in fluid intake to prevent renal calculi
- ✓ Side effects:
headache, N&V,
flatulation, esophagitis

Vit D Supplement

- ✓ Need to sun exposure and dietary Vit D intake (hypercalcemia if no sun exposure)
- ✓ Dysrhythmia, pancreatitis



MEDICATION

Bisphosphonates

- ✓ Half an hour before meal
- ✓ With a full glass of water
- ✓ 30-60 minutes in sitting or upright position with no meal
- ✓ Side effects: headache, N&V, flatulation, esophagitis,

SERM

- ✓ Avoid long period of Immobility
- ✓ Avoid unprescribed drugs
- ✓ Thromboemboli, headache, hot flashes, weight gain,...



MEDICATION

Teriparatide

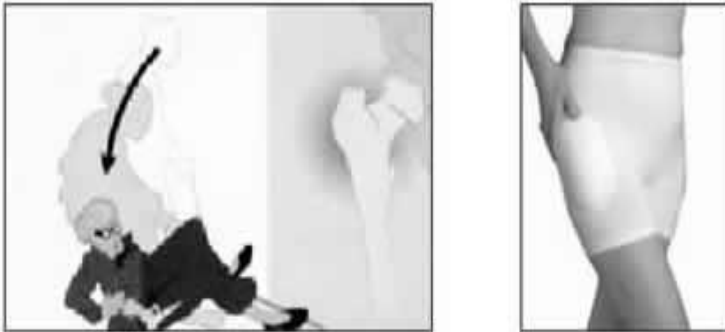
- ✓ Half an hour before meal
- ✓ With a full glass of water
- ✓ 30-60 minutes in sitting or upright position with no meal
- ✓ Side effects: headache, N&V, flatulation, esophagitis,

Calcitonin

- ✓ Proper use of spray
- ✓ Discontinue if nasal sore
- ✓ Side effects: Headache, itching, N&V, confusion

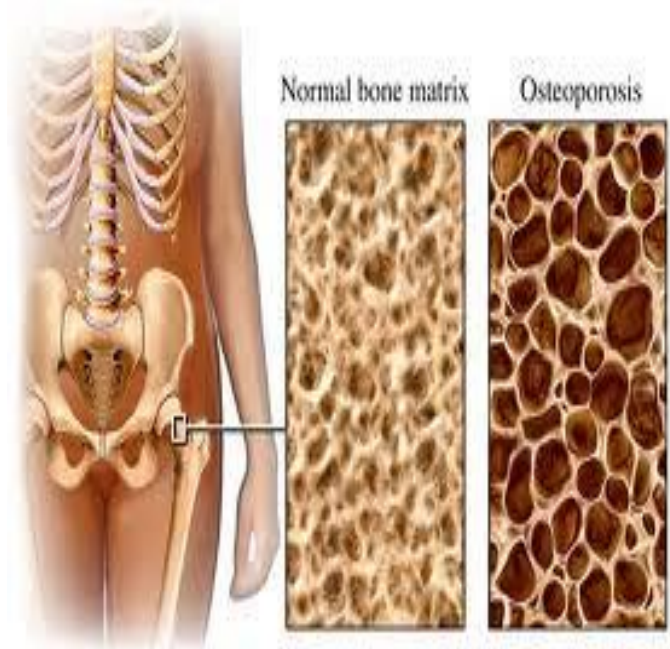
FALLING

Figure 6–8. Rationale for the Use of Hip Protectors to Prevent Fractures



Note: Falls to the side are associated with the majority of hip fractures. Energy absorption in soft tissue may account for up to 75% of the energy in a fall. Hip protector systems can be designed to be energy absorbing or energy shunting. The protective effect of this intervention is immediate, as opposed to the typical 1-2 years required for pharmacologic therapies.

Source: Kiel 2002.



FRACTURE

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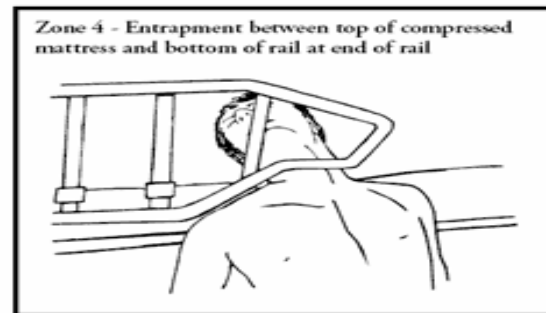
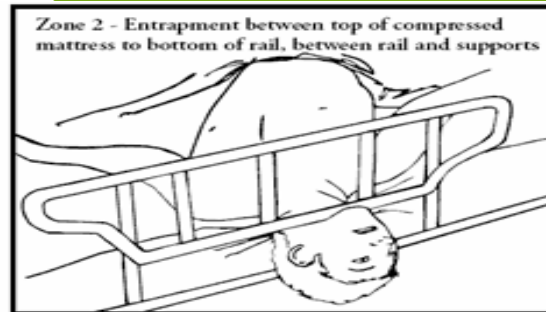
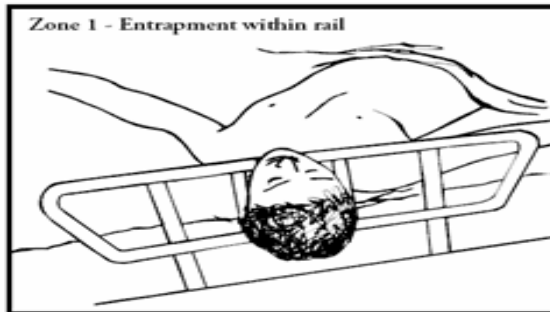
SAFE ENVIRONMENT & FALL PREVENTION

- 1) Establish a hazard-free environment
 - Adequate Lighting
 - Avoid spills & clutter or scattered rugs
 - Adjust bed to lowest position and place belongings near the patient
 - Side rail(controversial)
 - Better to avoid restraints
(more injury, AGS,BGS,AAOS,ANA, 2009)
- 2) Improve Vision(ophthalmologist visit)
- 3) Slow Movement

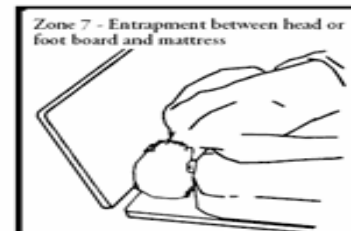


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Zones 5, 6 and 7 are not measured zones. These are shown here only for reference for future reporting of entrapment incidents.





**Side rail(more injury)
Hoffman et al 2003,**



**Better to avoid restraints
(more injury,AGS,BGS,AAOS,ANA, 2009)**

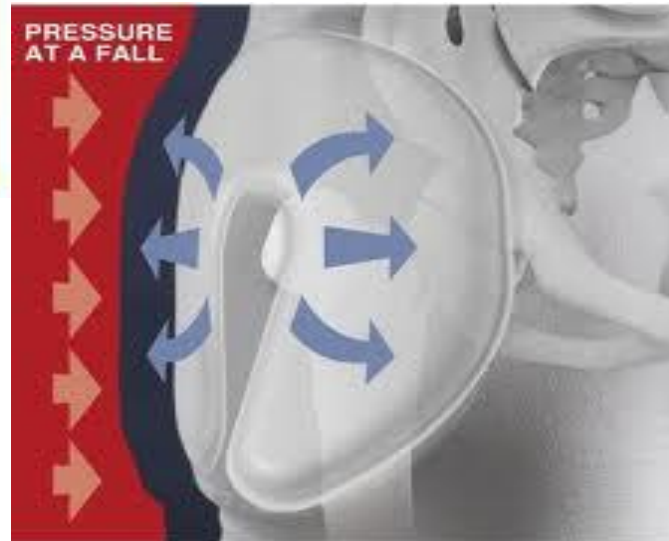
HIP FRACTURE PREVENTION



HIP PROTECTOR



Safe hip



ASSISTIVE DEVICES



CRUTCH

CANE



A.Shahrokhi, MSc



BRACES





*Thanks for
your attention*



